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(54) **DETECTION OF CORRELATION BETWEEN DETECTED TRANSMISSIONS FROM MULTIPLE BASE STATIONS AND A KNOWN CODE IN A MOBILE TELECOMMUNICATIONS SYSTEM**

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See application file for complete search history.

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(57) **ABSTRACT**

A mobile station in a spread spectrum communications system includes a matched filter that can be divided into segments. On initial acquisition, when a frequency deviation between the expected receiving frequency of the mobile station and the transmitting frequency of the base station is expected to be relatively large, the device can operate in a first synchronisation mode, in which the filter is used divided into segments. On searching for alternative cells, when the frequency deviation is expected to be smaller, the device can operate in a second synchronisation mode, in which the filter is used undivided. Thus, in the first mode, a reduced filter length avoids the difficulties caused by frequency deviation, while, in the second mode, an increased filter length allows faster acquisition.

5 Claims, 3 Drawing Sheets